Ashish Ranjan Karn [in]

Microsoft Certified Azure Data Scientist

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EDUCATION

Indian Institute of Technology (IIT) Kharagpur Kharagpur, India
Master's & Bachelor's in Electrical Engineering (Signal Processing), CGPA: 8.54/10 *July 2012 – May 2017*

Delhi Public School RK Puram Delhi, India
Senior Secondary (CBSE), Marks: 93% *July 2010 – May 2012*

EXPERIENCE

Grab Holdings Inc. Singapore
Lead Data Scientist (earlier Senior Data Scientist), Grab Food *Oct 2019 - Present*

- Part of the team responsible for enabling Machine learning capabilities, building predictive models and ETL Pipelines; collaborating with internal stakeholders, PMs, POs during various phases of a project.
- Leading food delivery ETA/Food prep time prediction framework; helped to improve total ETA prediction accuracy from 72% to 81% by implementing Batching buffer model using real-time driver supply demand characteristics; improved Food Preparation time (FPT) prediction from 62% to 77% enabling Just-In-Time allocation.
- Large Order (LO) prediction: Developed high precision (88%) classification model to predict if an order can be delivered on single 2 wheeler; used chatGPT to collect weights and dimensions data for food & mart items; Model helped to prevent cancellations, efficient allocation of drivers and charge LO handling fees from consumers.
- Demand forecasting for Grab Mart items: Accurate forecasting of item sales helped operations team in efficient procurement especially at times of promos/offers rollout; achieved WMAPE = 38% over 100k fast-selling items.
- Led AWS cloud cost optimization initiative; Implemented caching, migrated existing modelservings to custom serving infra (Kubernetes), python based Falcon servers to golang based microservices with higher concurrency.
- Tech stack: PySpark/Spark, Python, SQL, GoLang, Airflow, AWS infra, MLFlow, Kubernetes, Datadog

SAP Labs Pvt. Ltd. Bangalore, India
Data Scientist, Innovative Business Solutions (IBSo) *July 2017 - Sept 2019*

- Solution developer for a client project on scheduling Rigs for oil wells' maintenance; custom optimization algorithm developed to maximize oil production with several constraints increasing the average oil production by 6.2% .
- Developed a time-series forecasting API to forecast consumption of retail products with a dynamic safety stock band for inventory replenishment; achieved average forecast MAPE of 8% using XGBoost and ARIMA.
- Developed an image classification model for online fashion store client; multi-label classification belonging to 350 classes and a million sample input; fine tuned CNN with 16 layers to achieve hamming score of 65%.

RELEVANT PROJECTS

- Master's Thesis: Classification and Prediction of brain injury from heterogeneous biomedical data
  - Prediction of behavioral change with MRI data; used boosted and stacked Random Forest models.
  - Predicting medical efficacy and improvement in patients using statistical measures.
- Built WebUI for Face recognition and tracking of known faces from CCTV security cameras live video stream using face similarity matching using Python and SAP Cloud platform.
- Developed flask based Python chatbot for reporting queries from database based on Google DialogFlow and Recast.AI.

PATENTS

- **US20210095559A1**[Granted] Workover rig scheduling to maximize oil production for onshore oil fields
- [Pending] Dynamic Padding Buffer Time Optimisation for Food ETA Prediction
- [Pending] A real-time Reinforcement Learning Framework for food ETA Prediction

TECHNICAL SKILLS & CERTIFICATIONS

- **Languages/Platforms**: Python, SQL, C++, Golang, Perl, MATLAB, AWS, Azure services, SAP Cloud Platform
- **Software Packages**: Apache Spark, Apache Airflow, TensorFlow, Keras, MLFlow, SAP HANA
- **Knowledge Areas**: Machine Learning, Statistics, Deep Learning, Time-series forecasting
- **Certifications:** Microsoft Certified Azure Data Scientist
  Neural Networks and Deep Learning by deeplearning.ai on Coursera
  Other relevant certifications link